October 23, 2018

Mr. Adam Fox, P.E.
Principal Engineer
Environmental Compliance Section
Bureau of Engineering and Construction
State of Connecticut Department of Transportation
2800 Berlin Turnpike, P.O. Box 317546
Newington, CT 06131-7546

Attention: Amie Maines, P.E. / Robert Reilly

Subject: On-Call Asbestos, Lead, Air Quality & Demolition Compliance
Agreement No. 04.27-01(15)
HazMat Inspection – Bridge Nos. 01140, 05401 & Unnumbered Twin Pipe Culvert, Route 82 over E. Branch Eight Mile River and Swamp Brook, Salem, CT
ConnDOT Assignment No. 514-5719
ConnDOT Project No. 120-90
TRC Project No. 222165.5719.0710

Dear Mr. Fox:

TRC performed a limited survey for hazardous building materials associated with the replacement of Bridge Nos. 01140, 05401 and rehabilitation of the Unnumbered Twin Pipe Culvert, Route 82 over E. Branch Eight Mile River and Swamp Brook in Salem, Connecticut. Results of the survey identified lead paint to be present on the metal guardrail posts on Bridge No. 05401. Bridge No. 01140 was constructed entirely of unpainted concrete, therefore no lead paint was identified. Results obtained from TCLP waste stream sampling and analysis for leachable lead from the paint on the metal guardrail post components, characterized that paint waste stream as CTDEEP/RCRA hazardous waste. Black tar-like expansion joint material (EJ1) on Bridge Nos. 01140 & 05401 and roadway tar patching material (RP1) and black tar-like pads on Bridge No. 05401 were sampled and found to be non-ACM. No suspect asbestos containing tar was identified on the unnumbered twin corrugated steel pipes of the culvert near Bridge No. 05401. No bird/pigeon guano accumulations, hazardous/regulated items or bloodborne pathogens (BBP) concerns were observed in accessible areas of Bridge Nos 01140 & 05401. Associated laboratory data, site sketches, project description and site map are attached.

If you have any questions, please call TRC at (860) 298-9692.

Very Truly Yours,

TRC

Stephen R. Arienti, CHMM
Senior Project Scientist – Program Manager

Reviewed by:

Erik R. Plimpton, P.E., CHMM, CMC
Vice President – Engineer in Charge

Lead Based Paint Measurement Summary Table

Device(s): Niton XLP301-A (Serial #25555) X Ray Fluorescence (XRF) Spectrum Analyzer
Site: Bridge No. 05401, Route 82 over E. Branch Eight Mile River and Swamp Brook, Salem, CT
Project # : 222165.5719.0710
Date(s): 1/26/2018
Inspectors: Zac Smith

Number	Interior/ Exterior	Location	Bridge No.	Side	Structure	Feature	Material	Color	Condition	Reading (mg/cm^2)	Precision (mg/cm^2)	Depth Index	Duration (sec)	Date/Time
1			**Self Calibration**										48.0	1/26/2018 11:56
2			**0.0 Calibration**							0.0	0.0	1.0	2.4	1/26/2018 11:57
3			**0.7 Calibration**							0.7	0.1	1.0	7.7	1/26/2018 11:57
4			**1.6 Calibration**							1.6	0.2	1.1	6.6	1/26/2018 11:57
5	Exterior	Salem	Bridge No. 05401		Railing	Post	Metal	Silver/Grey	Defective	0.0	0.0	2.0	5.9	1/26/2018 12:02
6	Exterior	Salem	Bridge No. 05401		Railing	Post	Metal	Silver/Grey	Defective	0.0	0.0	1.0	7.7	1/26/2018 12:02
7			**0.0 Calibration**							0.0	0.0	1.0	8.9	1/26/2018 12:44
8			**0.7 Calibration**							0.7	0.1	1.1	5.9	1/26/2018 12:44
9			**1.6 Calibration**							1.6	0.1	1.1	7.7	1/26/2018 12:44

Lead paint includes paint found to contain **any detectable** amount of lead by Atomic Absorption Spectrophotometry (AAS) or X-Ray Fluorescence (XRF).

Side A = Street side; Sides B,C,D follow clockwise

80 Lupes Drive
Stratford, CT 06615

COMPLETE ENVIRONMENTAL TESTING, INC.

Tel: (203) 377-9984
Fax: (203) 377-9952
e-mail: cet1@cetlabs.com

Client: Mr. Erik Plimpton
TRC Environmental Consultants
21 Griffin Rd., North
Windsor, CT 06095

Analytical Report

CET# 8010701

Report Date:January 30, 2018
Project: Bridge
Project Number: Bridge 5401, 222165

Connecticut Laboratory Certificate: PH 0116
Massachusetts laboratory Certificate: M-CT903

New York NELAP Accreditation: 11982
Rhode Island Certification: 199

CET # : 8010701
Project: Bridge
Project Number: Bridge 5401, 222165

SAMPLE SUMMARY

The sample(s) were received at 23.2°C.

This report contains analytical data associated with following samples only.

Sample ID	Laboratory ID	Matrix	Collection Date/Time	Receipt Date
01	8010701-01	Paint Chip	1/26/2018 12:25	01/29/2018

Analyte: Total Lead [EPA 6010C]

Analyst: SS

Matrix: Paint Chip

Laboratory ID	Client Sample ID	Result	RL	Units	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
8010701-01	01	**1.4**	0.10	%	1	B8A3003	01/30/2018	01/30/2018 15:28	

CET # : 8010701
Project: Bridge
Project Number: Bridge 5401, 222165

All questions related to this report should be directed to David Ditta, Timothy Fusco, or Robert Blake at 203-377-9984.

Sincerely,

David Ditta
Laboratory Director

This technical report was reviewed by Robert Blake

R Blake J.

Project Manager

Report Comments:

Sample Result Flags:
E- The result is estimated, above the calibration range.
H- The surrogate recovery is above the control limits.
L- The surrogate recovery is below the control limits.
B- The compound was detected in the laboratory blank.
P- The Relative Percent Difference (RPD) of dual column analyses exceeds 40%.
D- The RPD between the sample and the sample duplicate is high. Sample Homogeneity may be a problem.
+- The Surrogate was diluted out.
*C1- The Continuing Calibration did not meet method specifications and was biased low for this analyte. Increased uncertainty is associated with the reported value which is likely to be biased low.
*C2- The Continuing Calibration did not meet method specifications and was biased high for this analyte. Increased uncertainty is associated with the reported value which is likely to be biased high.
*F1- The Laboratory Control Sample recovery is outside of control limits. Reported value for this analyte is likely to be biased on the low side.
*F2- The Laboratory Control Sample recovery is outside of control limits. Reported value for this analyte is likely to be biased on the high side.
I- The Analyte exceeds %RSD limits for the Initial Calibration. This is a non-directional bias.

All results met standard operating procedures unless indicated by a data qualifier next to a sample result, or a narration in the QC report.

For Percent Solids, if any of the following prep methods (3050B, 3540C, 3545A, 3550C, 5035 and 9013A) were used for samples pertaining to this report, the percent solids procedure is within that prep method.

Complete Environmental Testing is only responsible for the certified testing and is not directly responsible for the integrity of the sample before laboratory receipt.

ND is None Detected at or above the specified reporting limit
RL is the Reporting Limit.
All analyses were performed in house unless a Reference Laboratory is listed.
Samples will be disposed of 30 days after the report date.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA 6010C in Solid	
Lead	CT

Complete Environmental Testing operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Public Health	PH0116	09/30/2018

8010701

TRC
21 GRIFFIN ROAD NORTH
WINDSOR, CONNECTICUT 06095
TELEPHONE (860) 298-9692
FAX (860) 298-6380

Edition: September 2007
Supersede Previous Edition

CHAIN OF CUSTODY

LAB ID #.

PROJECT NUMBER	PROJECT NAME
222165	Bridge 5401

SIGNATURE	INSPECTOR
Eric Gitberg	Eric Gitberg

PARAMETERS: Total Pb; TCLP Pb

TURNAROUND TIME

Total Pb		24hr		48hr	X	3day		5day
TCLP		24hr		48hr	X	3day		5day

FIELD SAMPLE NUMBER	DATE	TIME	TYPE COMP	TYPE GRAB	SAMPLE LOCATION	Total Pb	TCLP Pb	NOTES
01	1/26/18	1225			Metal Posts	X		Material: Silver Paint
02	⊥	1224			⊥		X	⊥

Relinquished by: (Signature)	Date:	Received by: (Signature)	Relinquished by: (Signature)	Date:	Received by: (Signature)
Eric Gitberg	1/26/18	1200 1-29-18		1-29-18	
(Printed) Eric Gitberg	Time:	(Printed)	(Printed)	Time: 1605	(Printed)

Remarks: If sample 01 for total pb is positive analyze sample 02 for TCLP. If negative do not analyze. All results to eplimpton@trcsolutions.com

TEMP N 23.2°

Page 1 of 1

80 Lupes Drive
Stratford, CT 06615

COMPLETE ENVIRONMENTAL TESTING, INC.

Tel: (203) 377-9984
Fax: (203) 377-9952
e-mail: cet1@cetlabs.com

Client: Mr. Erik Plimpton
TRC Environmental Consultants
21 Griffin Rd., North
Windsor, CT 06095

Analytical Report

CET# 8010737

Report Date:February 02, 2018
Project: Bridge
Project Number: Bridge 5401, 222165

Connecticut Laboratory Certificate: PH 0116
Massachusetts laboratory Certificate: M-CT903

New York NELAP Accreditation: 11982
Rhode Island Certification: 199

SAMPLE SUMMARY

The sample(s) were received at 23.2°C.

This report contains analytical data associated with following samples only.

Sample ID	Laboratory ID	Matrix	Collection Date/Time	Receipt Date
02	8010737-01	Paint Chip	1/26/2018 12:24	01/29/2018

Analyte: TCLP Lead [EPA 6020A] **Analyst: CED**

Prep: EPA 3005A-1311 **Matrix: Extract**

Laboratory ID	Client Sample ID	Result	RL	Units	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
8010737-01	02	**7.8**	0.013	mg/L	1	B8B0124	02/01/2018	02/01/2018 18:19	

GET # : 8010737
Project: Bridge
Project Number: Bridge 5401, 222165

All questions related to this report should be directed to David Ditta, Timothy Fusco, or Robert Blake at 203-377-9984.

Sincerely,

David Ditta
Laboratory Director

This technical report was reviewed by Timothy Fusco

Project Manager

Report Comments:

Sample Result Flags:
E- The result is estimated, above the calibration range.
H- The surrogate recovery is above the control limits.
L- The surrogate recovery is below the control limits.
B- The compound was detected in the laboratory blank.
P- The Relative Percent Difference (RPD) of dual column analyses exceeds 40%.
D- The RPD between the sample and the sample duplicate is high. Sample Homogeneity may be a problem.
+- The Surrogate was diluted out.
*C1- The Continuing Calibration did not meet method specifications and was biased low for this analyte. Increased uncertainty is associated with the reported value which is likely to be biased low.
*C2- The Continuing Calibration did not meet method specifications and was biased high for this analyte. Increased uncertainty is associated with the reported value which is likely to be biased high.
*F1- The Laboratory Control Sample recovery is outside of control limits. Reported value for this analyte is likely to be biased on the low side.
*F2- The Laboratory Control Sample recovery is outside of control limits. Reported value for this analyte is likely to be biased on the high side.
I- The Analyte exceeds %RSD limits for the Initial Calibration. This is a non-directional bias.

All results met standard operating procedures unless indicated by a data qualifier next to a sample result, or a narration in the QC report.

For Percent Solids, if any of the following prep methods (3050B, 3540C, 3545A, 3550C, 5035 and 9013A) were used for samples pertaining to this report, the percent solids procedure is within that prep method.

Complete Environmental Testing is only responsible for the certified testing and is not directly responsible for the integrity of the sample before laboratory receipt.

ND is None Detected at or above the specified reporting limit
RL is the Reporting Limit.
All analyses were performed in house unless a Reference Laboratory is listed.
Samples will be disposed of 30 days after the report date.

GET # : 8010737
Project: Bridge
Project Number: Bridge 5401, 222165

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA 6020A in Water	
Lead	NY,CT

Complete Environmental Testing operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Public Health	PH0116	09/30/2018
NY	New York Certification (NELAC)	11982	04/01/2018

8010737

TRC
21 GRIFFIN ROAD NORTH
WINDSOR, CONNECTICUT 06095
TELEPHONE (860) 298-9692
FAX (860) 298-6380

Edition: September 2007
Supersede Previous Edition

CHAIN OF CUSTODY

LAB ID #.

PROJECT NUMBER	PROJECT NAME	PARAMETERS	TURNAROUND TIME
222165	Bridge 5401		Total Pb: 24hr ☐ 48hr ☐ 3day ☒ 5day ☐
			TCLP: 24hr ☐ 48hr ☐ 3day ☒ 5day ☐

SIGNATURE	INSPECTOR
Eric Gitberg	Eric Gitberg

FIELD SAMPLE NUMBER	DATE	TIME	TYPE: COMP	TYPE: GRAB	SAMPLE LOCATION	Total Pb	TCLP Pb	NOTES
01	1/26/18	1225			Metal Posts	X		Silver Paint
02	⊥	1224			⊥		X	⊥

Relinquished by: (Signature)	Date:	Received by: (Signature)	Relinquished by: (Signature)	Date:	Received by: (Signature)
Eric Gitberg	1/26/18	1200 1-29-18		1-29-18	
(Printed) Eric Gitberg	Time:	(Printed)	(Printed)	Time: 1605	(Printed)

Remarks: If sample 01 for total pb is positive analyze sample 02 for TCLP. If negative do not analyze. All results to eplimpton@trcsolutions.com

Page 1 of 1

TEMP N 23.2°

TRC

21 GRIFFIN ROAD NORTH
WINDSOR, CONNECTICUT 06095
TELEPHONE (860) 298-9692
FAX (860) 298-6380

Edition: October 2009
Supersede Previous Edition

ASBESTOS BULK SAMPLING CHAIN OF CUSTODY

LAB ID #. 51877

PROJECT NUMBER	PROJECT NAME
22165.5719.0710	Salem Bridge 01440

SIGNATURE	INSPECTOR
[signature]	Zachary Smith

TURNAROUND TIME

PLM:		8hr		24hr		48hr	X	3day
TEM:		24hr		48hr	X	3day		5day

FIELD SAMPLE NUMBER	DATE	TIME	TYPE COMP	TYPE GRAB	SAMPLE LOCATION	PLM EPA 600/R93/116 (POSITIVE STOP)	PLM EPA 600/R93/116 (w/ gravimetric reduction) (POSITIVE STOP)	ANALYZE BY LAYER	POINT COUNT (IF >1% & <10%)	TEM NY NOB 198.4 (IF PLM SERIES NEG)	MATERIAL
01	1/26/18	0945		X	Along water expansion joint	X					EJ 1 - black tar-like expansion joint
02	1/26/18	0946		X	"					X	"

Relinquished by: (Signature)	Date:	Received by: (Signature)	Relinquished by: (Signature)	Date:	Received by: (Signature)
[signature]	1/26/18	[signature] 1/26/18			
(Printed)	Time:	(Printed) 1600	(Printed)	Time:	(Printed)
		[signature]			

Remarks: Send Results to EPlimpton@TRCSolutions.com

Condition of Samples:
Acceptable: Yes ✓ No
Comments:

Industrial Hygiene Laboratory
21 Griffin Road North
Windsor, CT 06095
(860) 298-6308

TRC
Results you can rely on

BULK ASBESTOS ANALYSIS REPORT

CLIENT: CT Department of Transportation

Lab Log #:	0051877
Project #:	222165.5719.0710
Date Received:	01/26/2018
Date Analyzed:	01/29/2018

Site: Salem Bridge 01440, Salem, CT

POLARIZED LIGHT MICROSCOPY by EPA 600/R-93/116

Sample No.	Color	Homogenous	Multi-Layered	Layer No.	Other Matrix Materials		Asbestos %	Asbestos Type
01	Black (expansion joint)	Yes	No	- -	3%	cellulose	ND	None
02	Black (expansion joint)	Yes	No	- -	3%	cellulose	ND	None

Reporting limit- asbestos present at 1%
ND - asbestos was not detected
Trace - asbestos was observed at level of less than 1%
NA/PS - Not Analyzed / Positive Stop
SNA- Sample Not Analyzed- See Chain of Custody for details

Note: Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. In those cases, EPA recommends, and certain states (e.g. NY) require, that negative results be confirmed by quantitative transmission electron microscopy.

The Laboratory at TRC follows the EPA's Interim Method for the Determination of Asbestos in Bulk Insulation 1982 (EPA 600/M4-82-020) Bulk Analysis Code 18/A01 and the EPA recommended Method for the Determination of Asbestos in Bulk Building Materials July 1993, R.L. Perkins and B.W. Harvey, (EPA/600/R-93/116) Bulk Analysis Code 18/A03, which utilize polarized light microscopy (PLM). Our analysts have completed an accredited course in asbestos identification. TRC's Laboratory is accredited under the National Voluntary Laboratory Accreditation Program (NVLAP), for Bulk Asbestos Fiber Analysis, NVLAP Code 18/A01, effective through June 30, 2018. TRC is accredited by the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC in the Industrial Hygiene Program (IHLAP) for PLM effective through October 1, 2018. Asbestos content is determined by visual estimate unless otherwise indicated. Quality Control is performed in-house on at least 10% of samples and QC data related to the samples is available upon written request from client.

Analyzed by: Cathryn Lemire, Laboratory Analyst

Reviewed by: Kathleen Williamson, Laboratory Manager

Date Issued 02/01/2018

NT1041

Proscience Analytical Services, Inc.

22 Cummings Park, Woburn, MA 01801 Ph. 781-935-3212 Fax 781-932-4857

TEM Bulk Chain of Custody Record

Date: 02/02/18

PO#: **C222165**
Client: TRC
Client Job#: 222165.5719.0710
Client Job Ref./Loc.: CT DOT- Salem Bridge 01440, Salem, CT
Relinquished by: C. Lemire- CLemire@trcsolutions.com
Received by: Paula Leavitt Cole 2/6/18 9:40
Report to: E. Plimpton- EPlimpton@trcsolutions.com & SArienti@trcsolutions.com
Samplers Name: Z. Smith

Analysis Type: Chatfield **EPA N.O.B** Qualitative

Turn Around Time: <12 Hour <24 Hour <48 Hour **<3 Day** 5 Day Other:

				For Lab Use Only	
Client ID #	**Lab ID#**	**Description**	**Location**	**Acceptable on Receipt**	**Comments**
2	51877	Expansion Joint	See COC		

For Lab Use Only	# Spies	Total	Client #	Batch #	Results Reported	Comments

ProScience Analytical Services, Inc.

22 Cummings Park, Woburn, Massachusetts 01801
781-935-3212 ~ Fax: 781-932-4857 ~ E-Mail general@proscience.net

Laboratory Report

Client Project #: 22165.5719.0710
Client Reference: CT DOT - Salem Bridge 01440, Salem, CT
PO #: C222165
Client #: 297
Client Name: TRC Environmental Corp. (CT)

Batch: NT 17041
Method: NOB
Date Received: 2/5/2018
Date Analyzed: 2/8/2018
Date of Report: 2/8/2018

LAB ID	Field ID	Description:	Color	Initial Weight	% Asbestos Types						% Other	%	%	Total %	Analyzed /	Preped /
					CHR	AMO	ACT	CRO	ANT	TRE	Non-asb.	Organic	Carb.	Asbestos	Charged	Charged
NT128604	2	Expansion Joint		.3362	.19	.00	.00	.00	.00	.00	9.43	64.13	26.44	TR	Yes	No

Comments:

Key: CHR = Chrysotile AMO = Amosite CRO = Crocidolite ACT = Actinolite TRE = Tremolite ANT = Anthophyllite TR = Trace = < 1% ND = None Detected

Aimee L Cormier

Aimee Cormier, Analyst

TRC

Edition: October 2009
Supersede Previous Edition

21 GRIFFIN ROAD NORTH
WINDSOR, CONNECTICUT 06095
TELEPHONE (860) 298-9692
FAX (860) 298-6380

ASBESTOS BULK SAMPLING CHAIN OF CUSTODY

LAB ID #. 51876

PROJECT NUMBER	PROJECT NAME
222165 - 5719.0710	Salem Bridge 5401

SIGNATURE	INSPECTOR
	Zachary Smith

PARAMETERS

TURNAROUND TIME

PLM:		8hr		24hr		48hr	X	3day	
TEM:		24hr		48hr	X	3day		5day	

FIELD SAMPLE NUMBER	DATE	TIME	TYPE COMP	TYPE GRAB	SAMPLE LOCATION	PLM EPA 600/R93/116 (POSITIVE STOP)	PLM EPA 600/R93/116 (w/ gravimetric reduction) (POSITIVE STOP)	ANALYZE BY LAYER	POINT COUNT (IF >1% & <10%)	TEM NY NOB 198.4 (IF PLM SERIES NEG)	MATERIAL
01	1/26/18	1150		X	Vertical seam on abutment	X					EJ1 - Black Fibrous expansion joint
02		1151		X	Vertical seam on abutment					X	" "
03		1147		X	On top of road	X					RP1 - Hard tar road patching
04		1148		X	On top of road					X	" "
05		1200		X	Where abutment meets road deck	X					AP1 - Black tar-like pad
06	↓	1201		X	Where abutment meets road deck					X	" "

Relinquished by: (Signature)	Date:	Received by: (Signature)	Relinquished by: (Signature)	Date:	Received by: (Signature)
	1/26/18	1/26/18			
(Printed) Zachary Smith	Time:	(Printed) 1600	(Printed)	Time:	(Printed)

Remarks: Send results to EPlimpton@TRCSolutions.com

Condition of Samples: ____
Acceptable: Yes ____ No ____
Comments:

Industrial Hygiene Laboratory
21 Griffin Road North
Windsor, CT 06095
(860) 298-6308

TRC
Results you can rely on

BULK ASBESTOS ANALYSIS REPORT

CLIENT: CT Department of Transportation

Lab Log #:	0051876
Project #:	222165.5719.0710
Date Received:	01/26/2018
Date Analyzed:	01/29/2018

Site: Salem Bridge 5401, Salem, CT

POLARIZED LIGHT MICROSCOPY by EPA 600/R-93/116

Sample No.	Color	Homogenous	Multi-Layered	Layer No.	Other Matrix Materials		Asbestos %	Asbestos Type
01	Black (expansion joint)	Yes	No	- -	80%	cellulose	ND	None
02	Black (expansion joint)	Yes	No	- -	80%	cellulose	ND	None
03	Black (tar patching)	Yes	No	- -		- - -	ND	None
04	Black (tar patching)	Yes	No	- -		- - -	ND	None
05	Black (tar pad)	Yes	No	- -	3% 5%	cellulose fibrous glass	ND	None
06	Black (tar pad)	Yes	No	- -	3% 5%	cellulose fibrous glass	ND	None

Reporting limit- asbestos present at 1%
ND - asbestos was not detected
Trace - asbestos was observed at level of less than 1%
NA/PS - Not Analyzed / Positive Stop
SNA- Sample Not Analyzed- See Chain of Custody for details

Note: Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. In those cases, EPA recommends, and certain states (e.g. NY) require, that negative results be confirmed by quantitative transmission electron microscopy.

The Laboratory at TRC follows the EPA's Interim Method for the Determination of Asbestos in Bulk Insulation 1982 (EPA 600/M4-82-020) Bulk Analysis Code 18/A01 and the EPA recommended Method for the Determination of Asbestos in Bulk Building Materials July 1993, R.L. Perkins and B.W. Harvey, (EPA/600/R-93/116) Bulk Analysis Code 18/A03, which utilize polarized light microscopy (PLM). Our analysts have completed an accredited course in asbestos identification. TRC's Laboratory is accredited under the National Voluntary Laboratory Accreditation Program (NVLAP), for Bulk Asbestos Fiber Analysis, NVLAP Code 18/A01, effective through June 30, 2018. TRC is accredited by the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC in the Industrial Hygiene Program (IHLAP) for PLM effective through October 1, 2018. Asbestos content is determined by visual estimate unless otherwise indicated. Quality Control is performed in-house on at least 10% of samples and QC data related to the samples is available upon written request from client.

Analyzed by: Cathryn Lemire, Laboratory Analyst

Reviewed by: Kathleen Williamson, Laboratory Manager

Date Issued 02/01/2018

TRC LABORATORY ASBESTOS ANALYTICAL ACCREDITATIONS

NVLAP Lab Code 101424-0 AIHA-LAP,LLC #100122 CT #PH-0426 ME LA-0075, LB-0071 MA #AA000052 NY #10980 WV# LT000411
RI #AAL-007 TX #300354 VT #AL014538 LA#05011 VA #3333 000283 AZ #A20944 HI #L-09-004 NJ #CT004 CA #2907
CO# AL-15020 PHIL# 461 PA#68-03387

Proscience Analytical Services, Inc.

NT17042

22 Cummings Park, Woburn, MA 01801 Ph. 781-935-3212 Fax 781-932-4857

TEM Bulk Chain of Custody Record

Date: 02/02/18

PO#: **C222165**

Client: TRC

Client Job#: 222165.5719.0710

Client Job Ref./Loc.: CT DOT- Salem Bridge 5401, Salem, CT

Relinquished by: C. Lemire- CLemire@trcsolutions.com

Received by: Pamela Gault Cole 2/6/18 9:40

Report to: E. Plimpton- EPlimpton@trcsolutions.com & SArienti@trcsolutions.com

Samplers Name: Z. Smith

Analysis Type: Chatfield **EPA N.O.B** Qualitative

Turn Around Time: <12 Hour <24 Hour <48 Hour **<3 Day** 5 Day Other:

				For Lab Use Only	
Client ID #	**Lab ID#**	**Description**	**Location**	**Acceptable on Receipt**	**Comments**
2	51876	Expansion Joint	See COC		
4	51876	Tar Patching			
6	51876	Tar Pad			

For Lab Use Only	# Spies	Total	Client #	Batch #	Results Reported	Comments

ProScience Analytical Services, Inc.

22 Cummings Park, Woburn, Massachusetts 01801
781-935-3212 ~ Fax: 781-932-4857 ~ E-Mail general@proscience.net

Laboratory Report

Client Project #: 222165.5719.0710
Client Reference: CT DOT - Salem Bridge 5401, Salem, CT
PO #: C222165
Client #: 297
Client Name: TRC Environmental Corp. (CT)

Batch: **NT 17042**
Method: NOB
Date Received: 2/5/2018
Date Analyzed: 2/8/2018
Date of Report: 2/8/2018

LAB ID	Field ID	Description:	Color	Initial Weight	% Asbestos Types						% Other	%	%	Total %	Analyzed /	Preped /
					CHR	AMO	ACT	CRO	ANT	TRE	Non-asb.	Organic	Carb.	Asbestos	Charged	Charged
NT128605	2	Expansion Joint		.2803	.00	.00	.00	.00	.00	.00	9.32	85.94	4.74	ND	Yes	No
NT128606	4	Tar Patching		.3816	.00	.00	.00	.00	.00	.00	27.81	59.85	12.34	ND	Yes	No
NT128607	6	Tar Pad		.2307	.00	.00	.00	.00	.00	.00	28.48	55.22	16.30	ND	Yes	No

Comments:

Key: CHR = Chrysotile AMO = Amosite CRO = Crocidolite ACT = Actinolite TRE = Tremolite ANT = Anthophyllite TR = Trace = < 1% ND = None Detected

Aimee L Cormier

Aimee Cormier, Analyst

SHEET NO. _____ OF _____

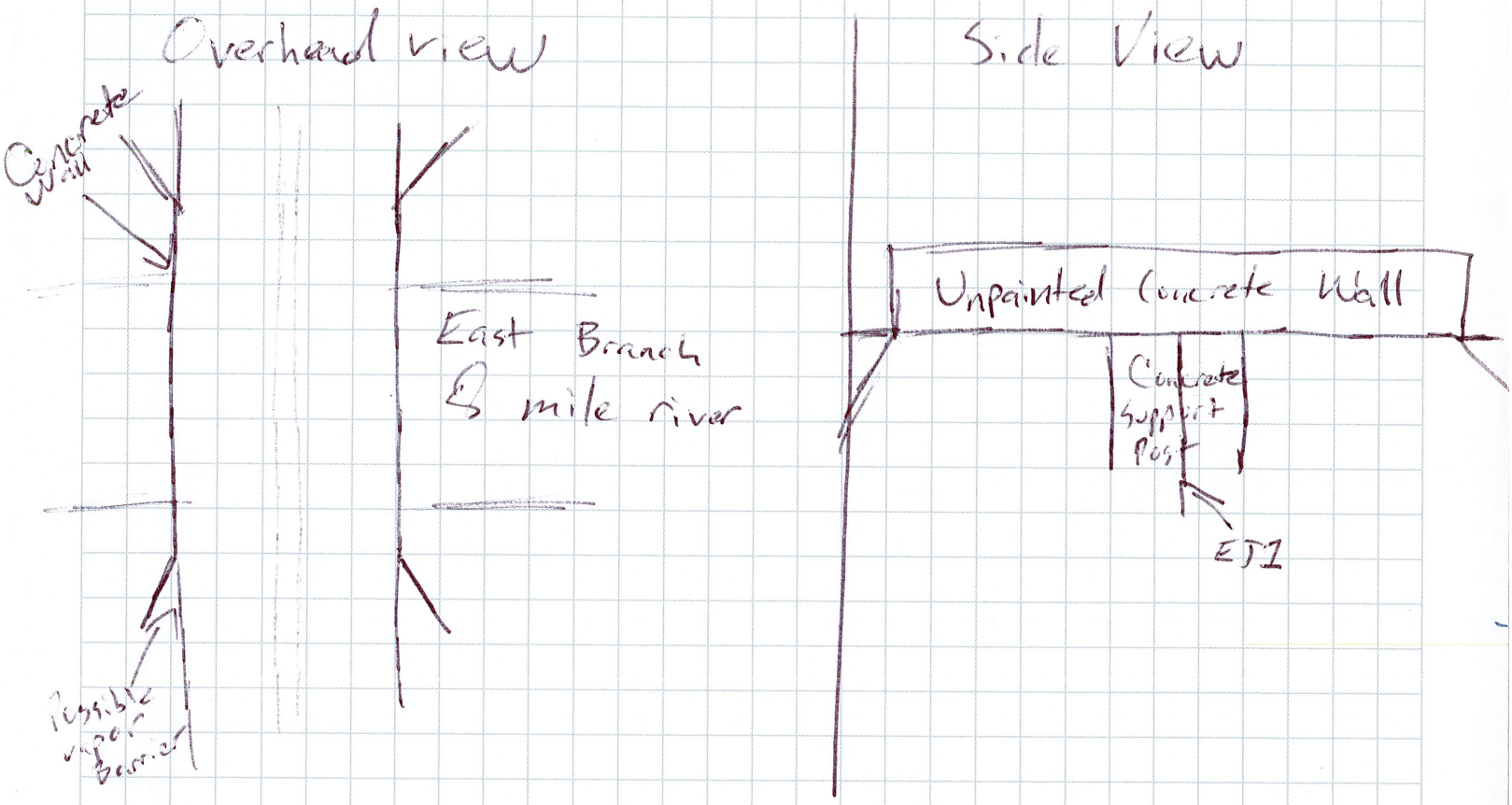
PROJECT NO. _____

DATE _____

BY _____

CHK'D _____

SUBJECT Bridge ~~1140~~ 1140



No Paint
No BBP
No Guano
No Haz

ACM: EJ1: Black tar up middle of bridge support post ~20LF

Possible vapor barrier behind concrete abutment Unable to confirm. *

* Confirmed No vapor barrier present 2/20

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SHEET NO. _____ OF _____

PROJECT NO. _____

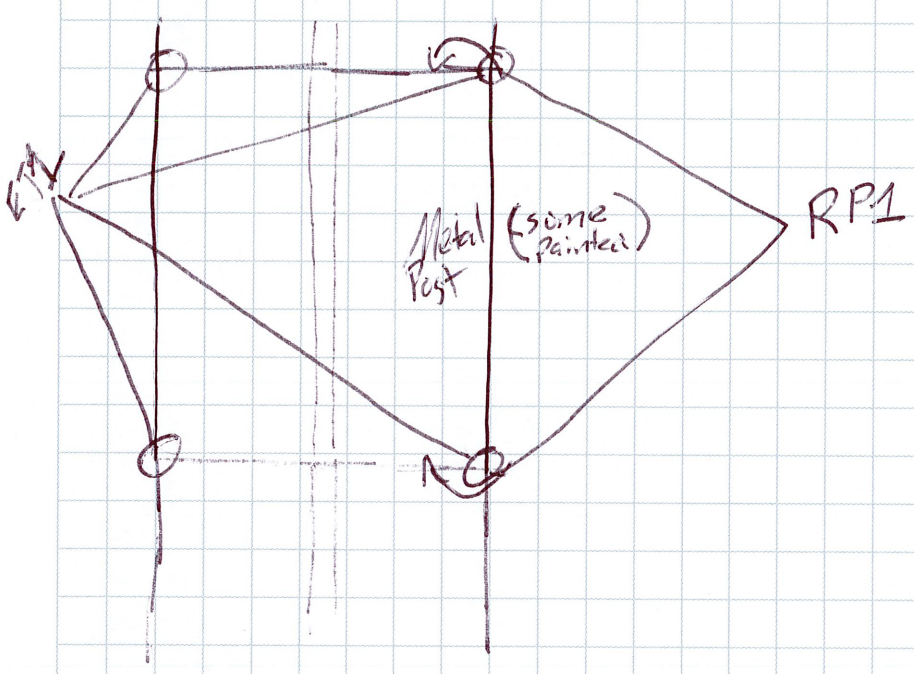
DATE _____

BY EG +2S

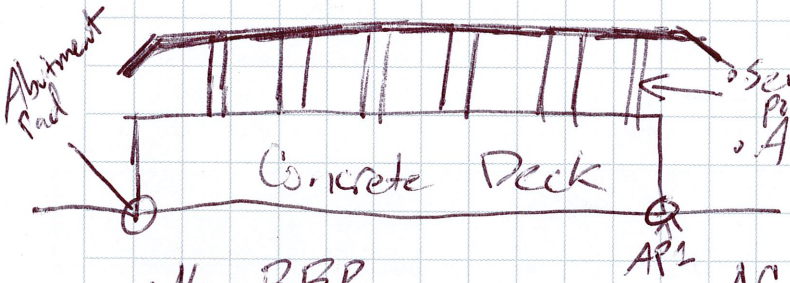
CHK'D _____

SUBJECT Bridge 05401

Overhead View:



Side View:



- Several (not all) Posts painted (.02 +/- .02)
- Also has galvanized metal girder.

- No BBP
- No haz items
- No Guano
- 3 Metal Beams painted
  Trace amounts of pb confirmed by XRF

ACM: ② RP1: Tar road patch at both ends of bridge ~50 LF

② EJ1: Black fibrous material at abutment seam (see photo)

No caulk at base of metal post

① AP1: Black tar where concrete slab is laid onto abutments. Assumed to be width of bridge. Unable to visually confirm

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SHEET NO. _____ OF _____

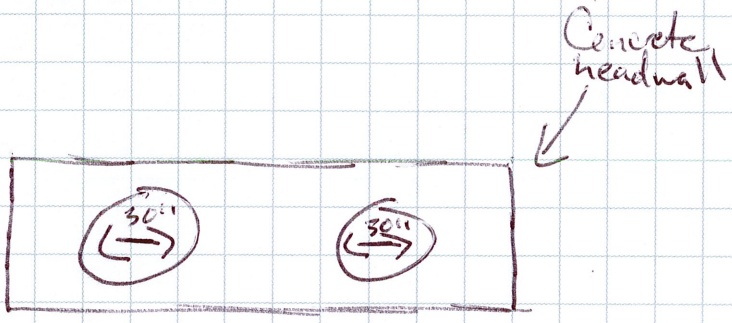
PROJECT NO. _____

DATE _____

BY EG + ZS

CHK'D _____

SUBJECT 05404 unnumbed Culvert



* Unable to access dye to culverts being submerged in frozen water and clogged with branches and leaves. (See Photos)
  - No Guano
  - No bbp
  - No visual paint
  - No haz
  - Assumed tar coating on interior of 30" culverts.

* Confirmed tar is present on Pipe
  Both 30" pipes are submerged under water so must assume possible
  Unable to access for sampling

* No tar present. Built up algae on bottom of pipe easily can be mistaken for tar

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STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

subject: State Bridge Program
State Project No. 120-90
Bridge Nos. 01140 & 05401
Route 82 over E. Branch Eight Mile River and Swamp Brook
Salem

m e m o r a n d u m

date: July 14, 2017

to:
Mr. Adam Fox
Transportation Principal Engineer
Bureau of Engineering and Construction

from:
Andrew J. Cardinali
Transportation Supervising Engineer
Bureau of Engineering and Construction

Andrew Cardinali Digitally signed by Andrew Cardinali DN: CN=US, E=andrew.cardinali@ct.gov, OU=Structural Bridge Design, CN=Andrew Cardinali Date: 2017.07.14 14:54:14-04'00'

Hazardous/Contaminated Materials Screening

This project consists of the following construction operations for Bridge No. 01140:

- Full replacement of Bridge No. 01140 with a longer, 56' single span bridge
- The bridge will be replaced using Accelerated Bridge Construction (ABC) techniques. The superstructure will consist of Prefabricated Bridge Units (PBUs) supported by pile-supported precast integral abutments
- Widening of the bridge to an out-to-out width of 37.67' and a curb-to-curb width of 34'
- Widening the approach roadway to provide a curb to curb width of 34' within the project limits. The roadway embankments beyond the roadway berm will be sloped at 2:1.
- Adjusting the roadway profile to accommodate the new superstructure at the proposed low chord elevation.

The projects also consists of the following construction operations for Bridge No. 05401:

- Full replacement of Bridge No. 05401, 200' to the east, with a longer, 32' single span bridge
- The bridge will be replaced using Accelerated Bridge Construction (ABC) techniques. The superstructure will consist of Prefabricated Bridge Units (PBUs) supported by pile-supported precast integral abutments
- Widening of the bridge to an out-to-out width of 37.67' and a curb-to-curb width of 34'
- Widening the approach roadway to provide a curb to curb width of 34' within the project limits. The roadway embankments beyond the roadway berm will be sloped at 2:1.
- Adjusting the roadway profile to accommodate the new superstructure at the proposed low chord elevation.

The project also consists of the following construction operations for the twin corrugated steel pipes to the east of Bridge No. 05401:

- Replacing the twin 30" corrugated steel pipes with new 30" concrete pipes and new cast-in-place concrete headwalls.
- Widening the approach roadway to provide a curb to curb width of 34' within the project limits. The roadway embankments beyond the roadway berm will be sloped at 2:1.

Excavation is anticipated for the rehabilitation work on Bridge Nos. 01140 and 05041 as well as the twin pipes to the east. The existing Bridge Nos. 01140 and 05401 will be demolished and removed, with the footings and lower portion of the abutments to remain in place. Excavation will also be required for the vertical profile adjustment of Route 82.

Additional information is attached for your use in generating the screening evaluation for the subject bridge:

- Location Map
- Limits of Work

Please provide this office with the results of the screening evaluation for use in developing and advancing this project.

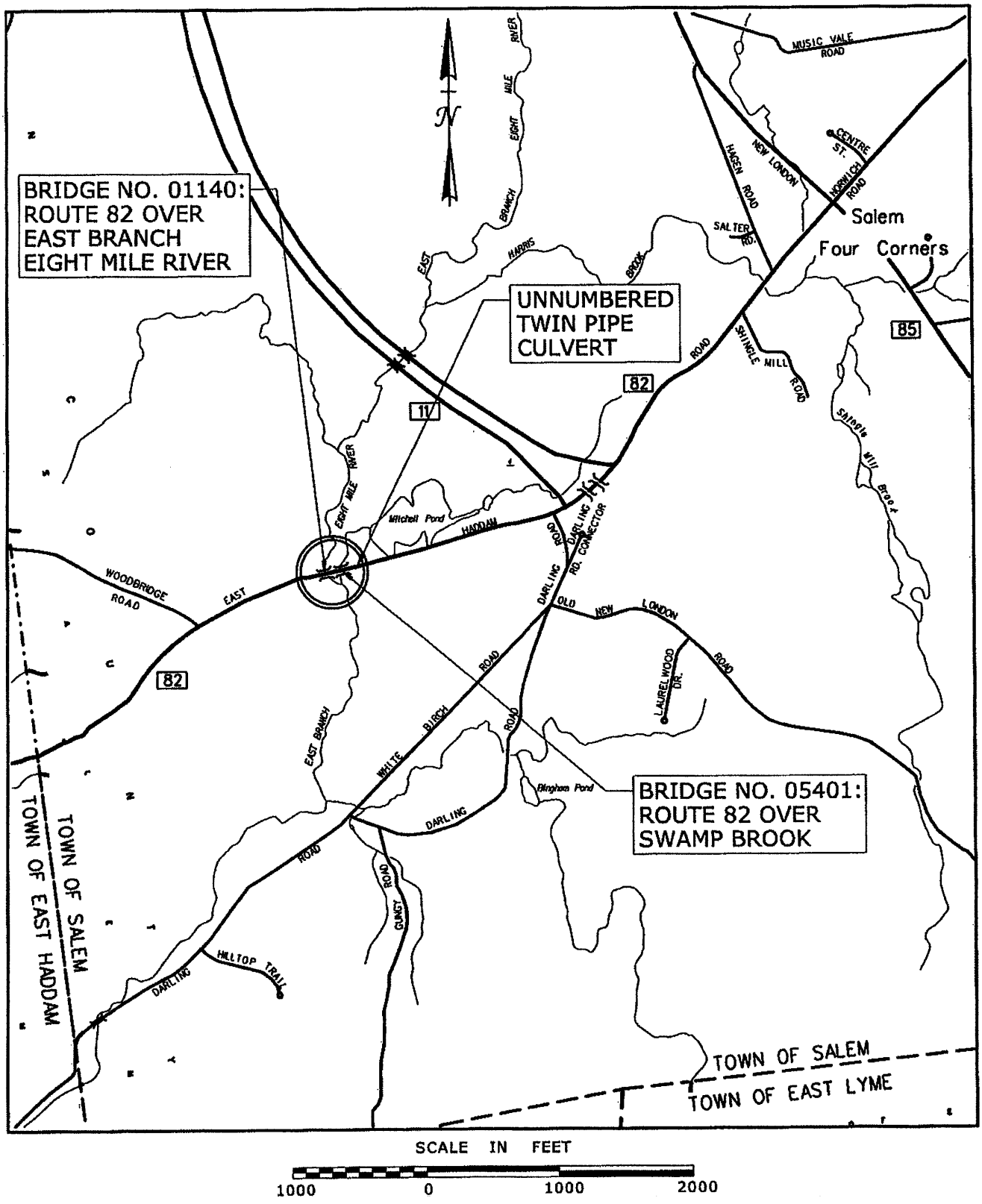
A reply by August 24, 2017 for the initial screening would be appreciated. Please provide this office with the results of the screening evaluation for use in developing and advancing this project. Should a lead investigation be required, please provide the results, including all special provisions, by July 16, 2018.

Time expended for the completion of these activities should be charged to Project No. 120-90. If you have any questions or require additional information, please contact Ms. Dobieslawa A. Kania, Transportation Project Engineer, at Ext. 3389.

Attachments

Mark J. Gardner/mjg/dak/ajc

cc: Rabih M. Barakat – Andrew J. Cardinali – Dobieslawa A. Kania
Donald P. Wurst – Mark J. Gardner (CME)



STATE PROJECT NO.: 120-90 CITY/TOWN: SALEM	**STATE OF CONNECTICUT** DEPARTMENT OF TRANSPORTATION **BRIDGE NOS. 01140 & 05401** **PROJECT LOCATION**	CME CME ASSOCIATES, INC.	DATE: 07/2017 SHEET NO.: 1 OF 1